

TTGTAACAGA AAATTAAAT ATACTCCACT CAAGGGAATT CTGTACTTTG CCCTTTTGGT -99
 AAAGTCTCAT TTACATTTCT AAACCTTTCT TAAGAAAATC GAATTCCTT TGATCTCTCT -39
 1 -1 M T S C H I
 TCTGAATTGC AGAAATCAGA TAAAAACTAC TTGGTGAA ATG ACT TCT TGT CAC ATT 18
 7 A E E H I Q K V A I F G G T H G
 GCT GAA GAA CAT ATA CAA AAG GTT GCT ATC TTT GGA GGA ACC CAT GGG 66
 23 N E L T G V F L V K H W L E N G
 AAT GAG CTA ACC GGA GTA TTT CTG GTT AAG CAT TGG CTA GAG AAT GGC 114
 39 A E I Q R T G L E V K P F I T N
 GCT GAG ATT CAG AGA ACA GGG CTG GAG GTA AAA CCA TTT ATT ACT AAC 162
 55 P R A V K K C T R Y I D C D L N
 CCC AGA GCA GTG AAG AAG TGT ACC AGA TAT ATT GAC TGT GAC CTG AAT 210
 71 R I F D L E N L G K K M S E D L
 CGC ATT TTT GAC CTT GAA AAT CTT GGC AAA AAA ATG TCA GAA GAT TTG 258
 87 P Y E V R R A Q E I N H L F G P
 CCA TAT GAA GTG AGA AGG GCT CAA GAA ATA AAT CAT TTA TTT GGT CCA 306
 103 K D S E D S Y D I I F D L H N* T
 AAA GAC AGT GAA GAT TCC TAT GAC ATT ATT TTT GAC CTT CAC AAC ACC 354
 119 T S N M G C T L I L E D S R N N
 ACC TCT AAC ATG GGG TGC ACT CTT ATT CTT GAG GAT TCC AGG AAT AAC 402
 135 F L I Q M F H Y I K T S L A P L
 TTT TTA ATT CAG ATG TTT CAT TAC ATT AAG ACT TCT CTG GCT CCA CTA 450
 151 P C Y V Y L I E H P S L K Y A T
 CCC TGC TAC GTT TAT CTG ATT GAG CAT CCT TCC CTC AAA TAT GCG ACC 498
 167 T R S I A K Y P V G I E V G P Q

FIG.1A

ACT CGT TCC ATA GCC AAG TAT CCT GTG GGT ATA GAA GTT GGT CCT CAG 546
 183 P Q G V L R A D I L D Q M R K M
 CCT CAA GGG GTT CTG AGA GCT GAT ATC TTG GAT CAA ATG AGA AAA ATG 594
 199 I K H A L D F I H H F N E G K E
 ATT AAA CAT GCT CTT GAT TTT ATA CAT CAT TTC AAT GAA GGA AAA GAA 642
 215 F P P C A I E V Y K I I E K V D
 TTT CCT CCC TGC GCC ATT GAG GTC TAT AAA ATT ATA GAG AAA GTT GAT 690
 231 Y P P R D E N G E I A A I I H P N
 TAC CCC CGG GAT GAA AAT GGA GAA ATT GCT GCT ATC ATC CAT CCT AAT 738
 247 L Q D Q D W K P L H P G D P M F
 CTG CAG GAT CAA GAC TGG AAA CCA CTG CAT CCT GGG GAT CCC ATG TTT 786
 263 L T L D G K T I P L G G D C T V
 TTA ACT CTT GAT GGG AAG ACG ATC CCA CTG GGC GGA GAC TGT ACC GTG 834
 279 Y P V F V N E A A Y Y E K E A
 TAC CCC GTG TTT GTG AAT GAG GCC GCA TAT TAC GAA AAG AAA GAA GCT 882
 295 F A K T T K L T L N A K S I R C
 TTT GCA AAG ACA ACT AAA CTA ACG CTC AAT GCA AAA AGT ATT CGC TGC 930
 311 C L H
 TGT TTA CAT TAG AA ATCACTTCCA GCTTACATCT TACACGGTGT CTTACAAATT 984
 CTGCTAGTCT GTAAGCTCCT TAAGAGTAGG GTTGTGCCTT ATTCAACTGC ATACATAGCT 1044
 CCTAGCACAG TGCCTTATTC GGTAGGCATC TAAGCAAATT TCCTAAATTA ATTAATATAT 1104
 CTTTAAAGAT ATCATATTTT ATGTATGTAG CTTATTCAA GAAGTGTTTC CTATTTCTAT 1164
 ATAGTTTATT ATACATGATA CTTGGGTAGC TCAACATTCT TAAATTAACAG CCTTTGTATT 1224
 CAGAAATATAA AATTGAAATA GATATATATA AAGTTAAAAA AAAAAAAAAA 1277

FIG.1B

	10v	20v	30v	40v	50v
HLASP	MTSCHIAEEHIQKVAIFGGTHGNETLGVFLVKHWLENGAEIQRTGLEVKPF				
	MTSCH:AE:.I:KVAIFGGTHGNETLGVFLVKHWLEN::EIQRTGLEVKPF				
BASPCDNA	MTSCHVAEDPIKKVAIFGGTHGNETLGVFLVKHWLENSTEIQRTGLEVKPF				
	10^	20^	30^	40^	50^
	60v	70v	80v	90v	100v
HLASP	ITNPRAVKKCTRYIDCDLNRIFDLENLGKKMS EDLPYEV RRAEINHLFGP				
	ITNPRAVKKCTRYIDCDLNR:FD ENLGKK.SEDLPYEVRRAEINHLFGP				
BASPCDNA	ITNPRAVKKCTRYIDCDLNRVFDPENLGKKK SEDL PYEVRRAEINHLFGP				
	60^	70^	80^	90^	100^
	110v	120v	130v	140v	150v
HLASP	KDS EDSYDII FDLHN'TTSNMGCTLILED SRN FLIQMFHYIKT SLAP LPCY				
	KDS EDSYDII FDLHN'TTSNMGCTLILED SRN :FLIQMFHYIKT SLAP LPCY				
BASPCDNA	KDS EDSYDII FDLHN'TTSNMGCTLILED SRND FLIQMFHYIKT SLAP LPCY				
	110^	120^	130^	140^	150^
	160v	170v	180v	190v	200v
HLASP	VYLIEHPSLKYATTRSIAKYPVGIEVGPQPGVLRADILDQMRKMIKHALD				
	VYLIEHPSLKYATTRSIAKYPVGIEVGPQPGVLRADILDQMRKMI:HALD				
BASPCDNA	VYLIEHPSLKYATTRSIAKYPVGIEVGPQPGVLRADILDQMRKMIQH ALD				
	160^	170^	180^	190^	200^
	210v	220v	230v	240v	250v
HLASP	FIH HF NEGKEFP PCA IEVYKII EK VDYPRDENG EIA AI IHP NLQDQD WK PL				
	FIH:FNEGKEFP PCA IEVYKI:KVDYPR:E:GEI:AI IHP :LQDQD WK PL				
BASPCDNA	FIH HF NEGKEFP PCA IEVYKIMR KVDY PRNESGEI SAI IHPKLQDQD WK PL				
	210^	220^	230^	240^	250^
	260v	270v	280v	290v	300v
HLASP	HPGDPMFL TLDG KTIPLGG DTVYP VFVNEAAY EK KEAFAKTTKLTLNAK				
	HP.DP:FL TLDG KTIPLGGDTVYPVFVNEAAY EK KEAFAKTTKLTLNA:				
BASPCDNA	HPEDPVFL TLDG KTIPLGG DOTVYP VFVNEAAY EK KEAFAKTTKLTLNAN				
	260^	270^	280^	290^	300^
	310v				
HLASP	SIRCCLH				
	SIR..LH				
BASPCDNA	SIRSSLH				
	310^				

FIG. 2

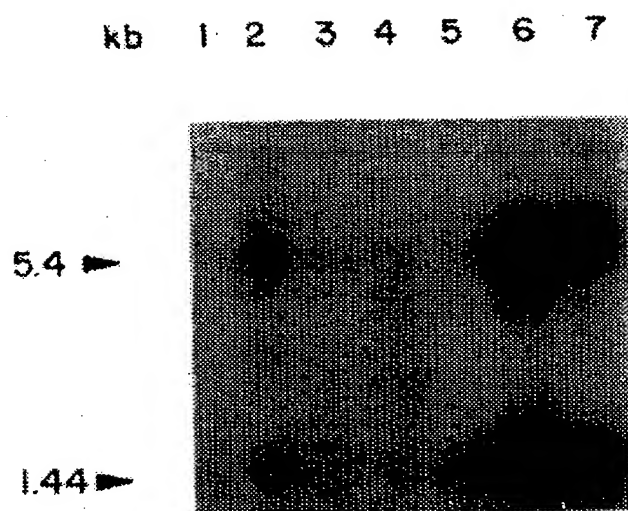


FIG. 3

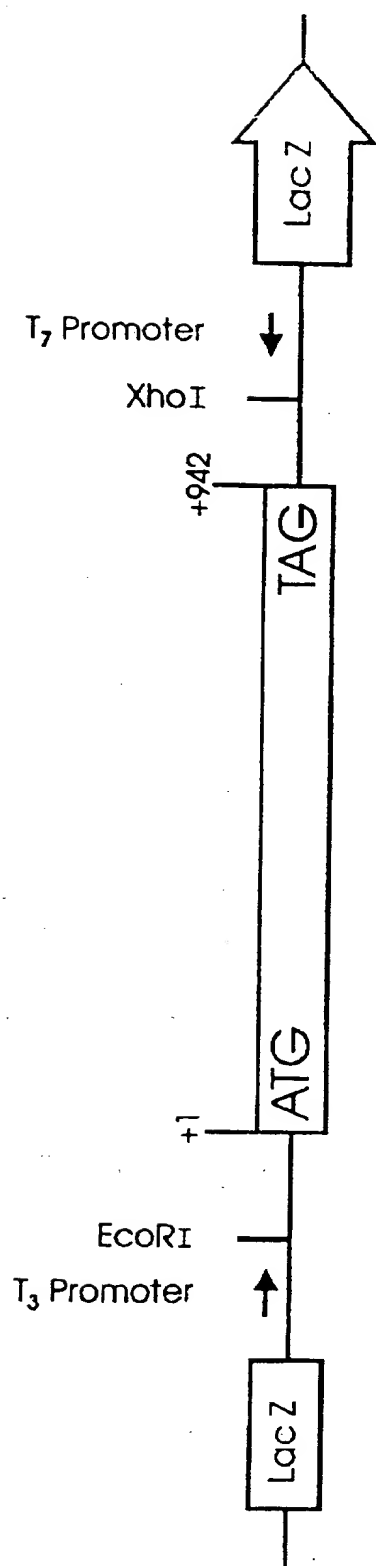


FIG. 4

FIG.5A

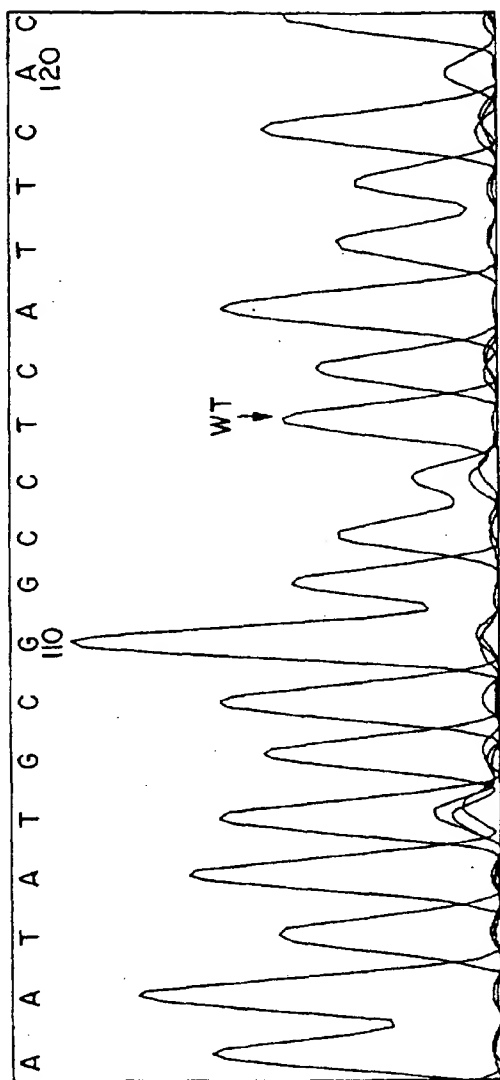
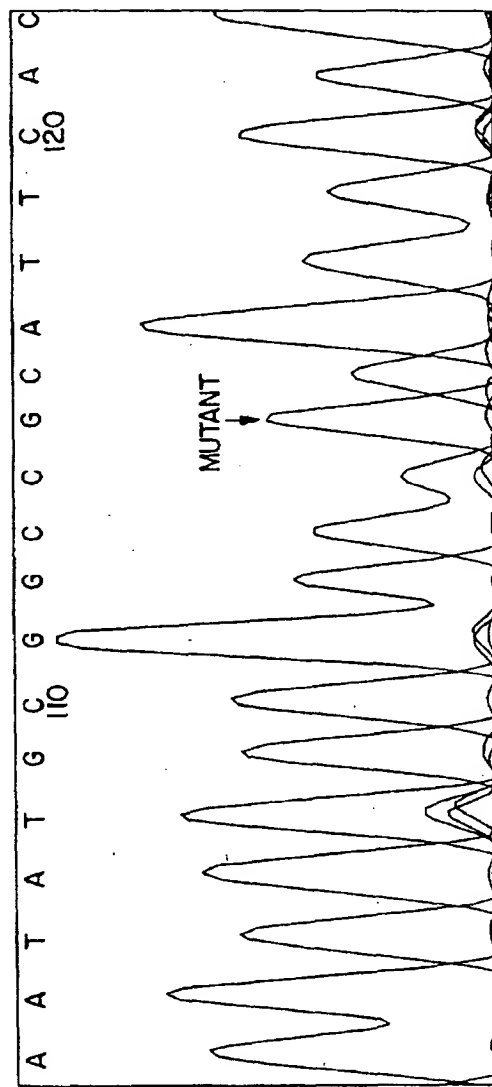


FIG.5B



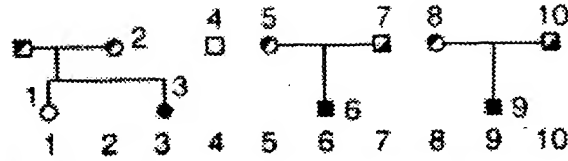
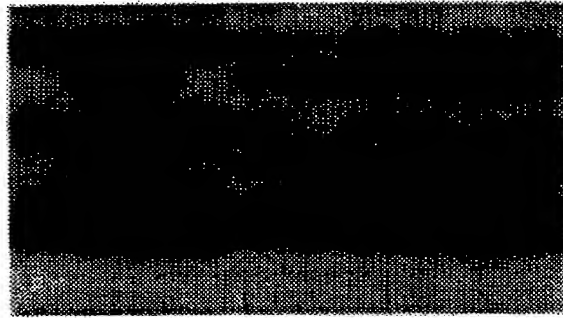
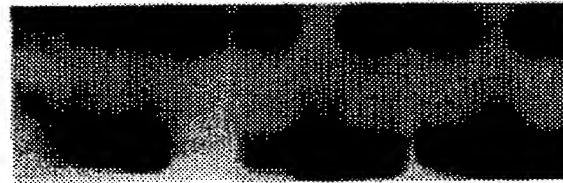


FIG.6A



← WT
← MUT
← WT
← MUT

FIG.6B



← 239 bp
← 125 bp
← 114 bp

[illegible]

m t s c h i a e e h i q k v a i f g g t
↑ START SITE

M	B	
N	P	
L	M	
1	1	

ATTCAGAGAACAGGGCTGGAGGTAAAACCATTTATTACTAACCCAGAGCAGTGAAGAAG
 -----+-----+-----+-----+-----+-----+-----+-----+-----+
 TAAGTCTCTTGTCCCGACCTCCATTTTGGTAAATAATGATTGGGGTCTCGTCACTTCTTC
 i q r t g l e v k p f i t n p r a v k k
 -----+-----+-----+-----+-----+-----+-----+-----+-----+

FIG. 7(a)

[illegible]

240

-----+-----+-----+-----+-----+-----+-----+-----+-----+

1

300

[illegible]

1

360

-----+-----+-----+-----+-----+-----+-----

FIG. 7(b)

n m g c t l i l e d s r n n f l i q m f

h y i k t s l a p l p c y v y l i e h p

s l k y | a t t r s i a k y p v g i e v g

[illegible]

FIG. 7(d)

20055560

```
S    PBMOD    F    ESASBBSBXBNMDD
F    SIBPP    O    CEPSSFIHALBPPI
C    TNONN    K    RCYRAAANOMAONNN
1    11121    1    2111JJN12141211
      ///      /// //////////////
GCTATCATCCATCCTAATCTGCAGGATCAAGACTGGAAACCACTGCATCCTGGGGATCCC
-----+-----+-----+-----+-----+-----+-----+-----+ 780
CGATAGTAGGTAGGATTAGACGTCCTAGTTCTGACCTTTGGTGACGTAGGACCCCTAGGG
a i i h p n l q d q d w k p l h p g d p
-----+-----+-----+-----+-----+-----+-----+-----+
N    TM      B    MDBBDBEMA BBAB    CR    CR
L    RS      B    BPBSPPIBL  SSBS    SS    SS
A    UE      V    ONSCUNNOW  ILIM    PA    PA
3    91      2    121911122  Y112    61    61
      /      / ///      ///
ATGTTTTTAACTCTTGATGGGAAGACGATCCCCTGGGCGGAGACTGTACCGTGTACCCC
-----+-----+-----+-----+-----+-----+-----+-----+ 840
TACAAAATGAGAACTACCCTTCTGCTAGGGTGACCCGCCTCTGACATGGCACATGGGG
m f l t l d g k t i p l g g d c t v y p
-----+-----+-----+-----+-----+-----+-----+-----+
SM      HIFA      H A
PN      ATNC      I L
OL      EAU1      N U
11      31H1      3 1
      /      //      *
GTGTTTGTGAATGAGGCCGCATATTACGAAAAGAAAGAAGCTTTTGCAAAGACAACATAA
-----+-----+-----+-----+-----+-----+-----+-----+ 900
CACAAACACTTACTCCGGCGTATAATGCTTTTCTTTCTTCGAAAACGTTTCTGTTGATTT
v f v n e a a y y e k k e a f a k t t k
-----+-----+-----+-----+-----+-----+-----+-----+
a854>c
E285>A
```

FIG. 7(e)

A
L
U
1

c914>a
A305>E

960

RM	A	ATM
MA	L	FRS
AE	U	LUE
11	1	291

1020

B	A	RM	H	D	S
S	L	MA	N	D	F
P	U	AE	F	E	A
W	1	11	3	1	N

1080

-----+-----+-----+-----+-----+-----+-----

[illegible]

201020 205300

✓ TM	✓ RS	✓ UE	✓ 91	✓ ATM	✓ SRS	✓ FUE	✓ PATM	✓ ASRS	✓ CEUE	✓ 191	✓ 1191	✓ TDM	✓ RRS	✓ UAE	✓ 911	✓ E	✓ C	✓ R	✓ V	✓ A	✓ L	✓ U	✓ 1
---------	---------	---------	---------	----------	----------	----------	-----------	-----------	-----------	----------	-----------	----------	----------	----------	----------	--------	--------	--------	--------	--------	--------	--------	--------

AATTTCTTAAATTAATTAATATATCTTTAAAGATATCATATTTTATGTATGTAGCTTATT
-----+-----+-----+-----+-----+-----+-----+-----+
TTAAAGAATTTAATTAATATATAGAAATTTCTATAGTATAAAATACATACATCGAATAA
-----+-----+-----+-----+-----+-----+-----+-----+
n f l n . l i y l . r y h i l c m . l i

X	N	A
M	L	L
N	A	U
1	3	1

CAAAGAAGTGTTTCCTATTTCTATATAGTTTATTATACATGATACTTGGGTAGCTCAACA
-----+-----+-----+-----+-----+-----+-----+-----+
GTTTCTTCACAAAGGATAAAGATATATCAAATAATATGTACTATGAACCCATCGAGTTGT
-----+-----+-----+-----+-----+-----+-----+-----+
q r s v s y f y i v y y t . y l g s s t

✓ TM	✓ TM
RS	RS
UE	UE
91	91
/	/

TTCTTAATAAACAGCCTTTGTATTCAGAATATAAAATTGAAATAGATATATATAAAGTTA
-----+-----+-----+-----+-----+-----+-----+-----+
AAGAATTATTTGTCGAAACATAAGTCTTATATTTTAACTTTATCTATATATATTTCAAT
-----+-----+-----+-----+-----+-----+-----+-----+
f l i n s l c i q n i k l k . i y i k l

AAAAAAAAAAAAAAAAAAAA
-----+-----+-----+-----+-----+-----+-----+-----+
TTTTTTTTTTTTTTTTTTTT
-----+-----+-----+-----+-----+-----+-----+-----+
k k k k k k

FIG. 7(g)